

10/507396

PATENT COOPERATION RECEIVED 10 SEP 2004

RECEIVED

16 DEC 2003

PCT**INTERNATIONAL PRELIMINARY EXAMINATION REPORT PCT**
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002127	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/ES02/00161	International filing date (day/month/year) 27.03.2002	Priority date (day/month/year) 27.03.2002
International Patent Classification (IPC) or both national classification and IPC C12C1/02		
Applicant BOSTLAN, S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the international application
 - VIII Certain observations on the international application

Date of submission of the demand 15.10.2003	Date of completion of this report 12.12.2003
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Boureau, J-L Telephone No. +49 89 2399-8454



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/ES02/00161

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-5 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/ES02/00161

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-5
	No: Claims	
Inventive step (IS)	Yes: Claims	1-5
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-5
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ES02/00161

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

- D1: US-A-4171215
- D2: US-A-4581069
- D3: WO-A1-9732716
- D4: US-A-5910324

2 Claim 1

Document D1 (claim 1, Examples) discloses a manganese alloying additive for addition to molten aluminium. The purpose is to improve the dissolution rate of the additive and the manganese recovery. The alloying additive is obtained by compacting a powder mixture comprising 50-90 wt% beta manganese (obtained from electrolytic manganese) and at least 10 wt% atomized aluminium powder. The average particle size of the aluminium powder is less than 40 mesh ($420 \mu\text{m}$). The manganese powder has a particle size of less than $590 \mu\text{m}$ and contains less than 50 wt% of particles of less than $44 \mu\text{m}$ in size.

The process according to claim 1 of the present application differs from the above known process by the following features:

- (a) the minitablets have a concentration of between 90 and 98 % of manganese,
- (b) the manganese powder is obtained by grinding flakes of electrolytic Mn and preventing the Mn fine powder to contain more than 15% fines (less than $100 \mu\text{m}$ in size),
- (c) the controlled Al grain size is between 100 and 800 μm with over 80% powder between 350 and 720 μm .

With the above differences, the process according to claim 1 is novel. It is also

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ES02/00161

inventive because said differences achieve (i) a better compaction of the minitablets due to a low content of manganese fines and (ii) a less expensive process due to a lower Al content of the minitablets.

The claimed solution to these problems is not rendered obvious by the prior art, e.g. by document D2 where the aluminium powder is not atomized and has a size distribution broader than in document D1.

Therefore, the subject-matter of claim 1 meets the requirements of novelty and inventive step (Article 33(2)(3) PCT).

Claims 2 and 3 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3. Claim 4

Document D3 discloses an apparatus for manufacturing tablets which comprises a storage hopper (5), a compacting hopper (10), compacting means in compaction chambers (2), a honeycomb valve (30) between the two hoppers (5,10).

The device according to independent claim 4 essentially differs from this known apparatus in that the storage hopper is provided with a central diffuser that diverts the product towards the sides of the hopper, thereby preventing the powders from passing directly to the respective feeder and compacting chambers.

Thus, the device according to claim 4 is novel. The above difference, especially adapted to prevent separation effects of a mixture of Mn and Al powders, is not rendered obvious by the available prior art, e.g. by document D4 (column 3, lines 50-59; Fig.1).

Consequently, the subject-matter of claim 4 meets the requirements of novelty and inventive step (Article 33(2)(3) PCT). The same applies to dependent claim 5.

4. According to the description (e.g. page 5, lines 16, 17), an essential requirement of the invention is that the content of fine Mn powder with a size of less than 100 micrometers should not be more than 15%.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ES02/00161

This essential requirement is not made clear in claim 1 because the relative term "fine powder" alone has no well-recognised meaning and leaves the reader in doubt as to the meaning of the technical feature to which it refers, thereby rendering the definition of the subject-matter of said claim unclear (Article 6 PCT).